

Building Energy Code Implementation

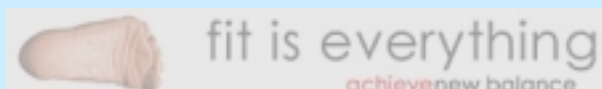
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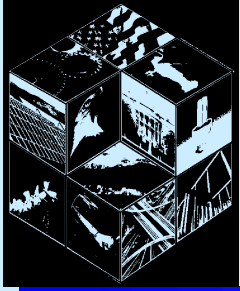
Jean J. Boulin

U.S. Department of Energy

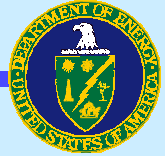
July 17, 2001

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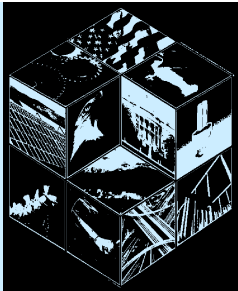




Background - DOE



- The Energy Conservation and Production Act (Section 304) Requires DOE to:
 - Make a determination as to whether revisions to the IECC would improve energy efficiency in residential buildings
 - Make a determination as to whether revisions to ASHRAE/IESNA Standard 90.1 will improve energy efficiency in commercial buildings
 - Make determinations within a year

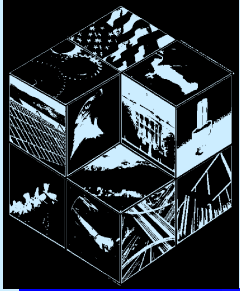


Background – States



- Upon a Positive determination, the Energy Conservation and Production Act (Section 304) Requires States to:
 - Consider whether to update its residential building energy codes to meet or exceed the revised residential code
 - Certify to DOE that it has held hearing and made a determination as to the appropriateness of updating its residential code
 - Certify and demonstrate to DOE that it has updated its commercial building energy code to meet or exceed the revised commercial code
 - Certifications are required within 2 years of the determination





Background – DOE

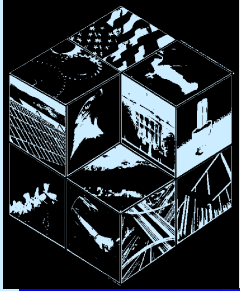


- DOE is required to provide technical assistance and financial assistance (incentive funding) to implement Section 304 of ECPA.

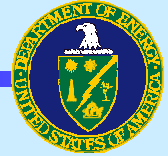


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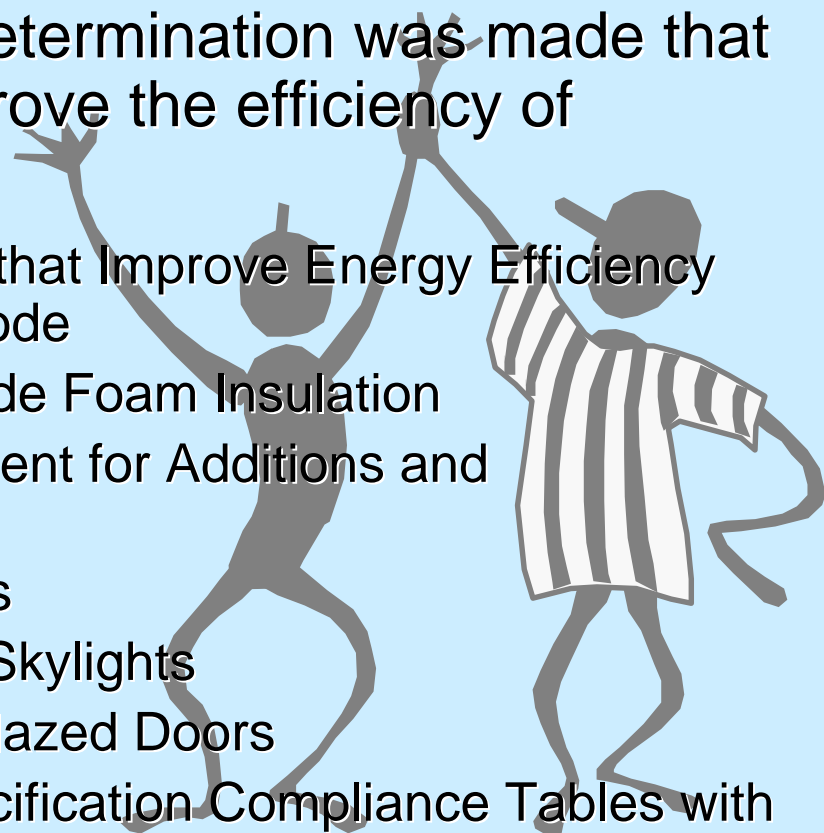


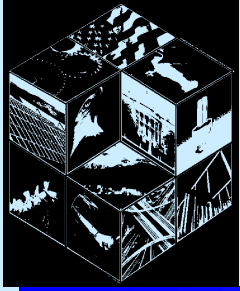


Determination – Residential

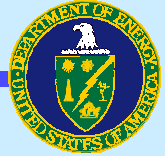


- On January 10, 2001, a determination was made that the IECC 2000 would improve the efficiency of residential buildings
 - Changes in the 2000 IECC that Improve Energy Efficiency and Compliance with the Code
 - Protection of Above-grade Foam Insulation
 - Solar Heat Gain Coefficient for Additions and Replacement Windows
 - Construction Documents
 - Definition of Roofs and Skylights
 - Treatment of Partially Glazed Doors
 - Use of Prescriptive Specification Compliance Tables with Steel-Framed and Masonry Walls



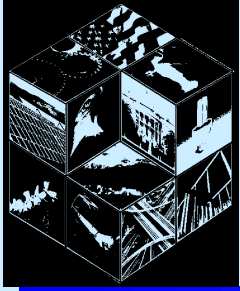


Determination – Residential (cont)

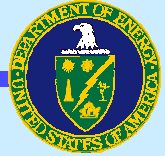


- Changes in the 2000 IECC that Decrease Energy Efficiency
 - Increase in U-value for Replacement Skylights
 - Simplified IECC Chapter for Some Buildings
- Most of changes improve energy efficiency and make the code easier to use and interpret.
- The benefits of the changes outweigh the negative impacts.

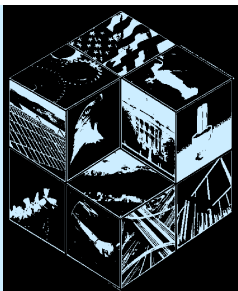




Determination – Commercial



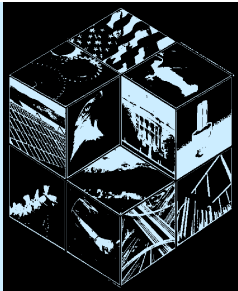
- DOE has performed both a quantitative and detailed textual analysis of Standard 90.1-1999 in preparation for making its determination
 - There are changes we can quantify
 - There are changes we cannot put a number on
- New administration reviewing analysis and staff recommendations



Estimated Percent Energy Savings



Building Type	Floor Area Weight	Percent Change in Whole Building Energy Use Intensity				
		Electric	Gas	Site EUI	Source EUI	\$UI
Assembly	0.068	9.5	-5.3	4.4	7.2	7.5
Education	0.218	11.4	-6.3	5.2	8.6	9.0
Food	0.027	-1.2	1.7	-0.4	-0.8	-0.9
Lodging	0.079	4.1	9.5	5.7	4.8	4.7
Office	0.190	10.6	-12.7	8.2	9.7	9.8
Retail	0.246	15.7	-30.7	12.7	14.7	14.9
Warehouse	0.173	-71.6	-11.3	-45.1	-58.7	-59.7
National	1.000	7.6	-6.8	4.5	6.4	6.6



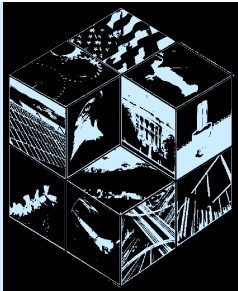
Tools, Materials and Training



- DOE has updated **MECcheck™** and **COMcheck-EZ™**, to reflect the revisions in the IECC
- DOE is updating **COMcheck-PLUS™** to reflect the revisions in Standard 90.1
- **CHECKmate** CD or Web
- ASHRAE published new
- ASHRAE
- Seminar
- Training
- Standards
- broad



development
and tested
lite training
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Tools, Materials and Training



■ Standard 90.1-1999 -- The Next Generation of Commercial Building Energy Standards.

- Satellite Broadcast Video (128 minutes)

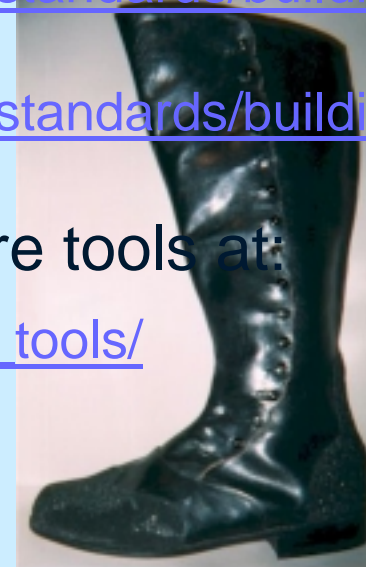
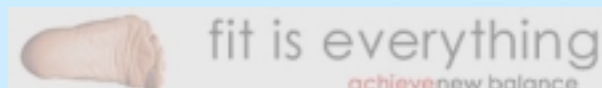
■ Differences between MEC 1995 and IECC 2000

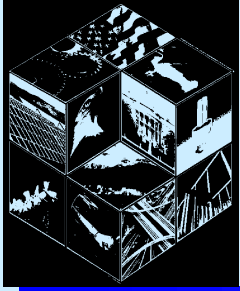
- http://www.eren.doe.gov/buildings/codes_standards/buildings/documents/pdfs/95mec-1998iecc.pdf
- http://www.eren.doe.gov/buildings/codes_standards/buildings/documents/pdfs/iecc_2000.pdf

■ Also see other building energy software tools at:

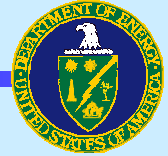
- http://www.eren.doe.gov/buildings/energy_tools/
- Download **EnergyPlus** at no charge

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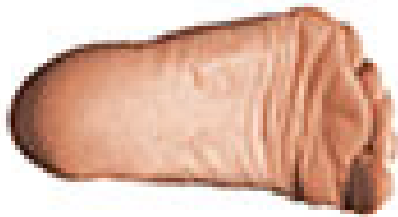
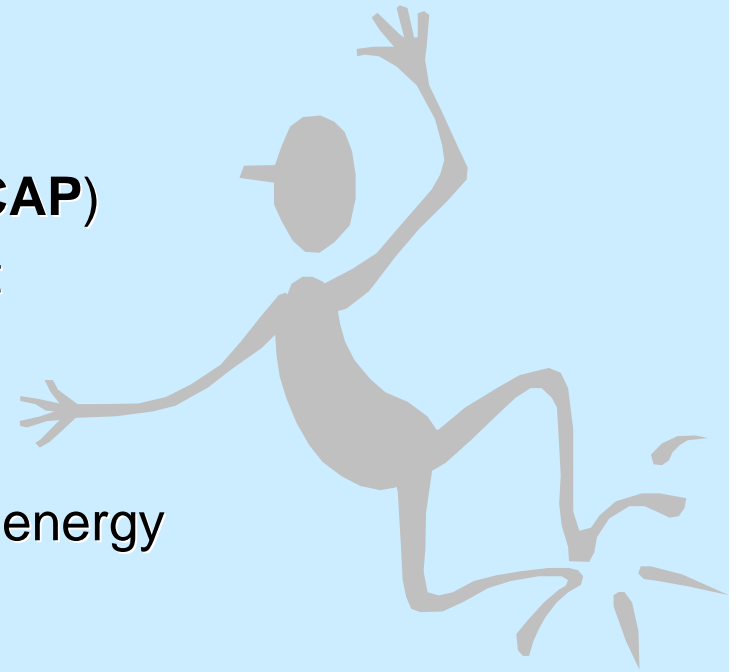




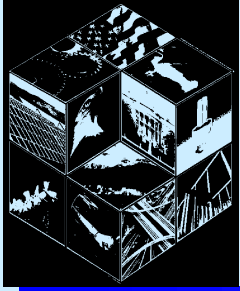
Technical and Financial Assistance



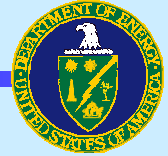
- Technical Assistance is available
 - To assist on smaller projects
 - Building Code Assistance Project (**BCAP**)
 - Advocacy and grass roots support
- Special Project Code grants
 - FY 2001 - \$4,200,000 awarded to adopt/update and implement building energy codes.



fit is everything
achieve new balance

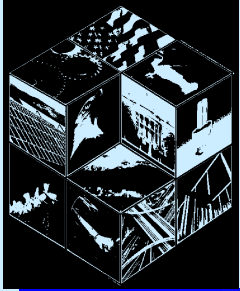


Web Site & Hot Line



- Visit our web site -- WWW.EnergyCodes.org
 - Down load tools and materials
- Visit our HotLine – 1-800-270-CODE (2633)
 - Order materials
 - Technical assistance
 - Call your Regional Support Office!!





Questions



That's all folks!

